

The Culture  
of Cities

Lewis Mumford

1938

Harcourt, Brace and Co. N.Y.

工字部武昌教室藏書

1948

## 15: Cycle of Growth and Decay

During the last generation there have been numerous attempts P.283 to summarize the course of city development and to correlate this with the rise and fall of civilizations. One of the best-known of these interpretations is that of Oswald Spengler in the book euphemistically translated as *The Decline of the West*. He traced the development of the community from "culture" to "civilization": from its beginnings as the living expression of a people, harmoniously interacting upon a certain soil and swayed by a common feeling toward life and the earth and the universe, not yet formulated as philosophic vision, to the final stage, that which he called civilization, with its hard mechanistic organization of men and goods and ideas: rootless, spiritless, ultimately lifeless and hopeless: concentrated in a few world capitals that were no longer related to the land, where the malleable and changeable forms of earlier cultures were made over into dead stereotypes.

According to Spengler's early scheme, the process of mastery, which begins with agriculture, ends with a predominance of the machine: a contrivance in which there is for him something infernal, inimical to life. The business man and the engineer and the industrialist displace the artist and the peasant. But mechanism, tied to a ruthless scheme of exploitation, leads into savagery: Spengler acknowledged that fact and in his later formulations he even boasted of man's being a carnivore in order to justify the conclusion that the men of our time must heartily embrace savagery: submit to the lash of a Caesar and take part in his brutal machinations. There is of course a serious contradiction between Spengler's romantic belief in the predatory carnivores and the historic facts of rural domestication and urban culture; but one may pardon Spengler's barbarous solecisms if only because he was one of the first in our generation to grasp the critical significance of the city in the development of culture.

A later interpretation of this cycle of development and deterioration is that of Arnold J. Toynbee, in his monumental survey, *A Study of History*. Toynbee's study is more profound than Spengler's, is based on a much richer grasp of historic facts, and does not neglect empirical evidence for the sake of preserving intact a literary figure. Unfortunately, Toynbee's theory of the development of civilization does not embrace the special function of the city, as both the instrument and the symbol of this process; and although he rediscovers the function of the cloister, in his conception of withdrawal-and-return as necessary for the process of renewal, he does not connect this with the process of urban development itself. Hence Toynbee is weak precisely at the point where Spengler is strongest: though his division of the component cultures into societies, and his schematic cycle of development rest on a closer reading of the historical evidence.

The most significant summary of all, from the point of view developed in this book, is likewise the earliest: that put forward by Patrick Geddes a generation ago in his outline of the six stages of city development, from polis to nekropolis. Like a true disciple,

I have modified Geddes's scheme, something in the way that I modified his analysis of the paleotechnic and the neotechnic phases of the machine. Thus I propose to insert an earlier stage that he left out of the picture, and I have combined two of his later stages, those of Parasitopolis and Pathopolis into a single stage, since there is no observable time-interval between them. These modifications, made after his death, too late for his sanction, have the merit of placing the first three stages of the cycle on the rising curve, and the last three on the descending side; and this, P.285 I believe, is more in line with his essential views than his own original diagram.

First Stage: Eopolis. Rise of the village community. Development of permanent habitation and permanent external organs of association through the domestication of plants and the ensurance of a balanced food supply by the domestication of animals. Cultivation of the hard grains and legumes: also deliberate tree and vine culture: plentiful supply of proteins, vegetable fats, and fermented liquors. Surplus production in agriculture smooths over seasonal and cyclical irregularities and ensures an orderly routine of life: security and continuity. Permanent utilities for storage: translation of kinetic energy into potential energy (food storage) brings vast increase in power, economic and cultural.

Differentiation of the permanent dwelling house, and regular outlines of the village through systematic layout and orderly apportionment of land: pile villages, plains villages, etc. Important technical advances, especially in development of utensils and agricultural tools: basketwork, pottery, hoe, beginnings of systematic mining and tool-working: dawn of metallurgy. Fire as symbol of advance: hearth and altar. Oral transmission of tradition through occupational groups and through close companionship of senescents and youths. Association on basis of blood and neighborhood: predominance of primary groups. Culture continuous with life but limited by arbitrary restriction of experience (tabus), fear of departure from magical formulae, submissive respect for ancestral wisdom as transmitted by priesthood, and lack of stimulating intercourse with other cultures. First crude differentiation of villages on basis of topographic facts, local resources, indigenous occupations: mining villages, fishing villages, agricultural villages.

Arising probably in neolithic culture, the village remains the most enduring of collective forms. Its life underlies all subsequent transformations of civilization; and although villages that continue as such never climb more than part of the cycle upward and never participate except by adaptive infiltration in the advances made in the city, they likewise tend to escape the worst defects of decay. The agricultural village, not the market, is the prototype of the city: its utilities for protection, storage, and life-maintenance are the essential nucleus of the city: they become "etherealized" in P.286 culture-forms, at the same time as they are finally given concrete expression in the form of collective art: altar becomes temple: planting and harvest rituals become drama and theater, granary bin and cellar are village prototypes of library, archive, museum and vault. The village remains the essential root from which fresh urban

shoots from time to time thrust upward: its form and content persist long after more differentiated urban types have flourished and disappeared. Hence the truth in the boast of the little village near Edinburgh:

Musselburgh was a borough when Edinburgh was none,

And Musselburgh will be a borough when Edinburgh is gone.

Second Stage: Polis. An association of villages or blood-groups having a common site that lends itself to defense against depredation: a common deity with a common shrine or temple, usually on or near the defensive site: a common meeting place where the special products and skills of the larger community may be interchanged in periodical markets. Rise in industrial productivity through the more systematic division of labor and the partial specialization of functions: development of trades and crafts: surplus of manufactured goods as well as surplus of food. Beginnings of mechanization: stamping, molding, casting, in the early river-civilizations, the water-mill, the paved road, the general use of wheeled vehicles in Graeco-Roman civilization: special instruments of power and precision in addition to the above in modern civilization in its eotechnic phase.

Free energy: free time: release from incessant preoccupation with physical survival. Opportunity for further nurture of the family, for education, for the cultivation of the body in military and athletic exercise, for the discipline of the mind in contemplation and dialectics and science, and for the practice of the humane arts. Systematic medicine and health-culture. Further development of social division of labor through multiplication of purposive associations and organizations. Differentiation of theoretic from empiric knowledge: beginnings of mathematics, astronomy, philosophy: increased scope of a special class, immune to obligations of practical labor, devoted to preserving and extending the cultural heritage. Erection of special buildings that collectively embody new cultural and political functions: temple, stadium, theater, guildhall, cathedral. Rise of the school, as the organ for systematically transmitting elements of social heritage to the young; and further differentiation of the cloister from the school: grove, shaded walk, porch, cloister, study, studio, laboratory. Civic unity and common vision of life symbolized in Temple or Cathedral. Increase of cultural storage by means of sculptured figures, painted images, monuments, books.

Preservation of rural occupations and rural customs, including the practice of piety toward ancestors and ancestral rites: the polis remains a collection of families; family organization tends to prevail in industry no less than in agriculture; seasonal and other migrations between village and polis preserve and renew rural connections. Dependence upon the local region for water, building materials, food, and main industrial resources. Transformation of structures in impermanent materials into more durable ones: refinement of architectural detail: formal modifications of shrines and important buildings so as to reflect collective sentiments about life and the universe. Pervasiveness of esthetic and moral culture through all ranks of society: expression of a differentiated but still homogeneous way of life.

Third Stage: Metropolis. Within the region one city emerges from the less differentiated groups of villages and country towns. Taking advantage of a strategic location, a larger supply of potable water, a more defensible site, better land for agriculture, easier command of land routes or water routes, a safer harbor--usually with a number of these advantages coming together--one city succeeds in attracting larger numbers of inhabitants: it becomes the metropolis or "mother-city." In heaping up these advantages, the command of retransportation routes probably marks the critical change: compare the Hittites with the Egyptians, or the land-locked Spartans with the adventurous, mobile, water-borne Athenians.

With a surplus of regional products, a specialized trade develops with other regions. This brings to the growing metropolis the necessary food supply, which can no longer be raised in the immediate vicinity, along with a host of stimulating goods from other regions: special fabrics, special forms, even esthetic patterns, unused by the traditional industries of the local region. Cross-fertilization of culture takes place: stimulus to fresh invention; stimulus to departures from routine. Long distance trading and long distance administration help further invention and create a necessity for abstract symbols: pictorial signs, numerical tables, alphabets. A foreign population of traders and students enters the metropolis: unabsorbed as citizens at first, since blood and neighborhood may still count, they bring the shock of fresh habits and ideas: challenges to old ways. Further specialization of economic and social functions: the specialized workshop: the specialized trading class: subdivisions of these. Large-scale development of library and university as storehouse and powerhouse of ideas. Development of more effective organs of centralized administration, apart from primitive courts and assemblies. Agriculture tends to be secondary to manufacture: manufacture in turn becomes an instrument of trade. Rivalry between patricians of the soil and new trades and industrialists of the metropolis: splitting off of landless workers, selling their labor, with no prospect of rise in economic rank. Also migration of an elite within the polity. Religion, literature, the drama reach the stage of self-conscious criticism and expression: the systematic-rational grows at the expense of organic and instinctive modes of expression. Every part of the environment and the culture is deliberately remolded: written law supplements custom and common law, written language helps to shape the labile dialects of the surrounding regions and gives them a common medium of secondary intercourse: rational inquiry challenges customary acceptance. The representatives of religion, philosophy, and science, no longer united as a single priestly hierarchy, pursue separate paths: the gap between sacred knowledge and secular knowledge, between empiricism and theory, between deed and idea, tends to widen; but out of these oppositions and likenesses, out of these hostilities and wider friendships, new syntheses come forth. A similar refocusing takes place in every other department of life: emancipation from fixed patterns and stereotyped routine. Fusion of the instinctive, the imaginative, and the rational in great philosophies and works of art: maximum release of cultural energy: Platonian Athens: Dantesan Florence: Shakespearean London: Emersonian Boston.

Signs of weakness appear beneath the surface. Increasing failure to absorb and integrate disparate cultural elements: beginnings P.289 of an individualism that tends to disrupt old social bonds without creating new order on a higher plane. Professionalizing of war, already differentiated as a culture-trait, acquires new energy through increasing technical equipment, and new impetus from economic rivalry. Opening up of a grave breach between the owners of the machinery of production and the workers, whether slave or free: beginning of the class struggle in active form. Fixation on pecuniary symbols of gain, as the growing class of merchants and bankers begin to exercise greater influence.

Fourth Stage: Megalopolis. Beginning of the decline. The city under the influence of a capitalistic mythos concentrates upon bigness and power. The owners of the instruments of production and distribution subordinate every other fact in life to the achievement of riches and the display of wealth. Physical conquest by military means: financial domination by trade and legal processes: loans, mortgages, speculative enterprises. The agricultural base extends: the lines of supply become more tenuous: the impulse to aggressive enterprise and enterprising aggression grows as the lust for power diminishes the attraction of all other attributes of life: as the moral sense becomes more callous and the will-to-culture increasingly impotent. Standardization, largely in pecuniary terms, of the cultural products themselves in art, literature, architecture, and language. Mechanical reproduction takes the place of original art: bigness takes the place of form: voluminousness takes the place of significance. Triumph of mechanism in every department: passivity: manual helplessness: bureaucratism: failure of direct action.

Megalopolis ushers in an age of cultural aggrandizement: scholarship and science by tabulation: sterile research: elaborate fact-finding ~~and~~ apparatus and refined technic with no reference to rational intellectual purpose or ultimate possibilities of social use: Alexandrianism. Belief in abstract quantity in every department of life: the biggest monuments, the highest buildings, the most expensive materials, the largest food supply, the greatest number of worshipers, the biggest population. Education becomes quantitative: domination of the cram-machine and the encyclopedia, and domination of megálopolis as concrete encyclopedia: all-containing. Knowledge divorced from life: industry divorced from life-utility: life itself compartmentalized, dis-specialized, finally disorganized and enfeebled. P.290 Representatives: Alexandria, third century B.C.; Rome, second century A.D.; Byzantium, tenth century; Paris, eighteenth century; New York, early twentieth century.

Over-investment in the material apparatus of bigness. Diversion of energy from the biological and social ends of life to the preparatory physical means. Outright exploitation of the proletariat and increasing conflict between organized workers and the master classes. Occasional attempts at insurance by philanthropy on the part of the possessing classes: justice in homeopathic doses. Occasional outbursts of savage repression on the part of frightened bourgeoisie, employing basest elements in the city. As conflict intensifies rise of a coalition between landed oligarchy, trained in combat, and a megalopolitan rabble of speculators, enterprisers, and financiers who

furnish the sinews of war and profit by all the occasions for class-suppression, price-lifting, and looting that it gives. The city as a means of association, as a haven of culture, becomes a means of dissociation and a growing threat to real culture. Smaller cities are drawn into the megalopolitan network: they practice imitatively the megalopolitan vices, and even sink to lower levels because of lack of higher institutions of learning and culture that still persist in bigger centers. The threat of widespread barbarism arises. Now follow, with cumulative force and increasing volume, the remaining downward movements of the cycle.

Fifth Stage: *Tyrrannopolis*. Extensions of parasitism throughout the economic and social scene: the function of spending paralyzes all the higher activities of culture and no act of culture can be justified that does not involve display and expense. Politics becomes competition for the exploitation of the municipal and state exchequer by this or that class or group. Extirpation of organs of communal and civic life other than "state." Caesarism. Development of predatory means as a substitute for trade and give-and-take: naked exploitation of colonies and hinterland: intensification of the cycles of commercial depression, following overexpansion of industry and dubious speculative enterprise, heightened by wars and war-preparations. Failure of the economic and political rulers to maintain the bare decencies of administration: place-hunting, privilege-seeking, bonus-collecting, favor-currying, nepotism, grafting, tribute-exacting become rife both in government and business. Widespread moral apathy and failure of civic responsibility: each group, each individual, takes what it can get away with. Widening of the gap between producing classes and spending classes. Multiplication of a Lumpenproletariat demanding its share of bread and shows. Overstress of mass-sports. Parasitic love of sinecures in every department of life. Demand for "protection money" made by armed thugs and debased soldiery: organized looting, organized blackmail are "normal" accompaniments of business and municipal enterprise. Domination of respectable people who behave like criminals and of criminals whose activities do not debar them from respectability. 291

Imperialistic wars, internal and external, result in starvation, epidemics of disease, demoralization of life: uncertainty hangs over every prospect of the future: armed protection increases all the hazards of life. Municipal and state bankruptcy. Drain of local taxes to service increasing load of local debt. Necessity to appeal to the state for further aid in periods of economic disorganization: loss of autonomy. Drain of national taxes to support the growing military establishment of the state. This burden penalizes the remnants of honest industry and agriculture, and further disrupts the supply of elementary material goods. Decrease in agricultural production by soil-mining and erosion, through falling off in acreage, through the withholding of crops from the city by resentful husbandmen. Decline in rate of population-increase through birth control, abortion, mass slaughter, and suicide: eventual absolute decline in numbers. General loss of nerve. Attempt to create order by external military means: rise of gangster-dictators (Hitler, Mussolini) with active consent of the bourgeoisie and systematic terrorism by pretorian guards. Recrudescence of superstition and deliberate cult of savagery: barbarian invasions from within and without. Beginnings of megalopolitan

exodus. Material deficiencies and lapses of cultural continuity: repression and censorship. Cessation of productive work in the arts and sciences.

Sixth and Final Stage: Nekropolis. War and famine and disease rack both city and countryside. The physical towns become mere shells. Those who remain in them are unable to carry on the old municipal services or maintain the old civic life: what remains of that life is at best a clumsy caricature. The names persist; the reality vanishes. The monuments and books no longer convey meaning; the old routine of life involves too much effort to carry on: the streets fall into disrepair and grass grows in the cracks of the pavement: the viaducts break down, the water mains become empty; the rich shops, once looted, remain empty of goods by reason of the failure of trade or production. Relapse into the more primitive rural occupations. The historic culture survives, if at all, in the provinces and the remote villages, which share the collapse but are not completely carried down by it or submerged in the debris. First the megalopolis becomes a lair: then its occupants are either hunted out by some warrior band, seeking the last remnants of conquest in gold or women or random luxurise, or they gradually fall away of their own accord. The living forms of the ancient city become a tomb for dying: sand sweeps over the ruins: so Babylon, Nineveh, Rome. In short, Nekropolis, the city of the dead: flesh turned to ashes: life turned into a meaningless pillar of salt.

#### 16: Possibilities of Renewal

History is full of burying grounds: the dead forms and deserted shards of communities that had not learned the art of living in harmonious relations with nature and with other communities. The end stage, over which Spengler gloated, is an undeniable reality that has overtaken many civilizations: dead-food for the vulturelike imagination.

But one must not, like a Spengler or a Sorokin, make the mistake of identifying the logical stages of a process, as discovered and systematized by intellectual analysis, with the living reality. For in real life, in real cultures, history does not present a solid laminated block of uniform dimensions that one may break down into smaller blocks, each unified within itself to form part of a consistent whole. Endprocesses often occur in the middle of a culture; accidental mischances and injuries may bring to the middle-aged the normal deteriorations of senescence. Likewise early processes or rejuvenating reactions may be noted in the final phases of the most mechanized civilization. In short, time as experience and duration upsets this P.293 logical order, which is based chiefly on time as an attribute of spatial movement. Mutations arise in human communities from unexpected sources: the social heritage makes society much less of a unity than we are compelled to conceive it, by the nature of language, when we interrupt the complex stream of actual life in order to take account of it in thought. Out of these mutations, a new social dominant may arrive: veritably a saving remnant.

To take the simplest point of all: the final stage in civilization is often reached at an intermediate point in urban development. Witness fourteenth century Rome. It exhibited most of the characteristics of a Nekropolis, including a loss, not alone of the single title to papal supremacy, but of a good part of its population. Yet, after that nadir had been reached, a renewal took place: two centuries later its ruins stimulate Brunelleschi and its new buildings offer a

challenge to the genius of Michelangelo. The other point to remember is that civilization is not, even in its utmost megalopolitan phase, confined to the world-cities alone. Though they cast their shadows over the farthest territories, neither their governments nor their armies nor their culture institutes can embrace with any degree of thoroughness the provinces they lay claim to: part of their dominion is mere bluff and pretense, unchallengeable until actually challenged.

Even in the ultimate stage of Tyrannopolis, the tyranny is only partly effective: Krilov contrives to tell his satirical fables and Epictetus, the slave, thinks his own thoughts and preserves autonomy within his soul. At this stage there still remain regions and cities and villages with other memories, other backgrounds, other hopes: though in shackles to the external dictatorship, they remain essentially withdrawn. In the heyday of the megalopolitan economy, such regional centers remain partly outside the cycle: some failure of enterprise, some lack of opportunity, or some sturdier sense of life-values keeps them from sharing the delusive growth and splendor of the metropolis.

When, through the processes of decay and destruction hastened by Tyrannopolis, the great cities sink into ruin, these other centers, though they may stagger from the blow, will nevertheless continue to live: indeed, they may live more intensely once the incubus of the big city and its tyrannous system of political and financial administration is removed. Marseilles and some of the other towns of Provence had such a function after the disintegration of the old Roman civilization in Italy: this fact, along with their closer contact with Byzantium and the Arabic possessions, played a significant part, no doubt, in that brilliant outburst of Provencal culture in the early Middle Ages. On the other hand, to face the blacker side of the picture, the reverse process may happen: a process that doubly demands our watchful care today: that is, a deteriorative phase of culture may prolong its existence by capturing the fresh energies of a younger growth. In this fashion, Byzantium reached up to paralyze the "young" culture of sixteenth century Russia; and in similar fashion, again, the Tyrannopolis of the Czars in Russia, which exhibited many of the symptoms of the end-process by the close of the nineteenth century, has left its cruel mark on the fresh beginnings made by the Soviet regime: furthering that aimless centralization and that rigid bureaucracy and that habit of systematic repression of valid differences which leaves no place for young initiative, or for those forms of co-operation which, to be wholehearted, must be voluntary.

In other words, the life course of cities is essentially different from that of most higher organisms. Cities exhibit the phenomena of broken growth, of partial death, of self-regeneration. Cities and city cultures may have sudden beginnings from remote gestations; and they are capable of prolongations as physical organizations through the life-spans of more than one culture; witness Damascus, most ancient of surviving towns, already venerable in St. Paul's day. It is only as parable rather than as scientific statement that one may talk of the spring or winter of a civilization as if the cycle had a climatic inevitability, or of the birth and death of a culture-phase, or if any contemporary observer could confidently

recognize either the birthcry or the death-rattle.

Cities can take on new life by a transplantation of tissues from healthy communities in other regions or civilizations: a few hundred people, like the Huguenots in Scotland or Germany, or the Jews in almost every civilization, may have a profoundly stimulating effect. Today, the dispersal of the elite from Germany and Italy and in some degree from Russia may be one of the elements that will compensate P.295 for the growing elements of barbarism within those countries. And these transplanted tissues need not even be in the form of living people: the collective organs of culture, signs, symbols, forms, the abstract and etherialized essences, may likewise exercise a decisive effect: witness the powerful influence of Roman monuments and Greek literature in temporarily supplementing the spent energies of the Middle Ages. All that is necessary is that the organism which receives these new tissues shall be in a state of readiness.

In short: the roots of a culture are deep. If the crown is blighted by disease, it may still put forth new shoots at the base; and in time these shoots may flourish and provide a new trunk and crown. All these are of course figures of speech: but they are means of counter-acting and truing up analogies that are even more abstract, figures that are even more fanciful: the curve of a cucle, the succession of the seasons. Social life has its own laws and rhythms: much remains hidden or irrational: much escapes empiric observation and still more escapes statistical analysis. All one can say with any surety is this: when a city has reached the megalopolitan stage, it is plainly on the downward path: it needs a terrific exertion of social force to overcome the inertia, to alter the direction of movement, to resist the imminent processes of disintegration. But while there is life, there is the possibility of counter-movement, fresh growth. Only when the big city has finally become wasteland must the locus of life be elsewhere.

1. 美國的行政機關

2. 聯邦政府 1787 年憲法與各州政府

3. 联邦議會 聯邦參議院 聯邦眾議院

4. 聯邦執政官 聯邦總理

5. 聯邦執政官 聯邦總理

6. 聯邦執政官 聯邦總理

7. 聯邦執政官 聯邦總理

8. 聯邦執政官 聯邦總理

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22. 聯邦執政官 聯邦總理

3. 8:30 - 9:00

over 2000 individuals examined  
during screening &  
surveillance examination

1500000 total

100000 Garden City, 1000000

population Standard deviation = 100000

1500000 total

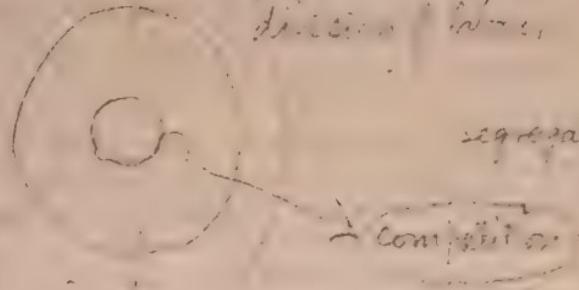
1000000 population

1000000 individuals 800000  
population

1500000 "orthognathic"

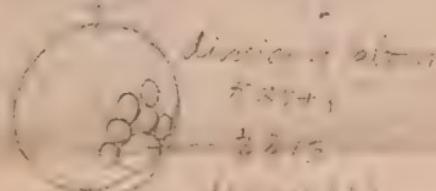
Japan

population: 130M.  
division: cities,

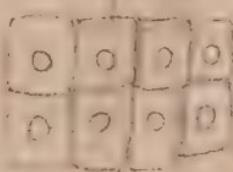


household  
population

100



住



house  
size

-5



uniformity  
homogeneity  
standardization

functions

① species

= genotype

= phenotype (what it does)

speciation

= genetic

= environmental

1. Genotype = phenotype

Individual mechanism

1. Individual = phenotype

Environment

2. Environmental = phenotype

Individual mechanism

Individual mechanism

coordination

Individual mechanism

↓

↓

Individual mechanism

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161

land committee.

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11

卷之三十一

1982-05-22

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Individual  
(Personality)

Chancery - 1850s - 1860s (1850)  
and 1870s - 1880s - 1890s  
standardized

late 19th century - standardization  
building, furniture, interior design?

1890s - 1900s - 1910s - 1920s

Art Nouveau - Art Deco - Art  
Deco and Art nouveau - 1910s, 1920s, 1930s

Documentary Standardization - 1910s - 1920s,  
1930s direction, 1940s, 1950s, 1960s  
standardization

memory - memory of history (1940s)

1940s - 1950s - 1960s - 1970s  
the homogenization of culture

standardization, homogenization  
globalization

contemporary life 1980s

new fundamentalism

death of God?

electrification

expansion

industrial system

new world?

第五章 藥理學

Unpleasant Theory of metabolism building up given away to the age of vertebrates, and we will no longer a protective shield, has become a skin,

which:

'specialization of parts'

'a system for maintaining a constant internal temperature and for regulating the air'

'the function of excretion'

is not shield.

original cause given movement of the body =  
temperature

Economy: the principle of living.

Economic economy  
material economy  
mechanical  
or organic

节本生活經濟。

tiny fractions.

Business organization - mass production  
quantitative - standardization  
qualitative - quality control

5. 4. 20

Economy, which is an economic culture concerned  
with production now provides the means for  
collective business.

most prominent community members  
members indicated ... participation in

and the different conditions of the soil will  
all be different considerations which have  
engaged my time.

*pinus pinaster*.

economic value.

*Microtus subterraneus* -  
red tail - *Peromyscus maniculatus*  
*Dipodomys deserti* - desert fox

*Amphibolite*

1870-1871

*Lamia*

Lans. 100

卷之三

1977-1

*Strewn with broken*

100. *Meristina* sp. n.

1. English Industrial Revolution  
2. Policy of industrialisation of  
commonality Trade & rent,  
colonialism  
global consequences war & fire  
India, 1857  
rural revolution

3. Nationalism  
city  
trade unionism  
colonialisation & culture  
nationalization of  
economy  
individualism  
class struggle  
capitalistic movement

4. Imperialism  
financial and military domination  
triumph of mechanism & imperialism  
colonialism  
monopoly

5. Tyrannopolis  
superior state's will & power  
more states become  
colonialism in a wide, wider & more

metropolis as a living place - moment.

not a social or anti-social moment  
P. 266

metropolis = 24 - oral eroticism

THE PLEASURE OF CIVILISATION  
P. 267

Jameson: metropolis contains a  
time (continuation of the past)

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in metropolis, the focus is to war

metropolis, a. anti-social agent; a moment

P. 278

anti-metropolitanism

metropolitan growth indefinitely minor

surv.

expense

biological need

stabilisation or variation

development & culture.

• means metropolitan life - moral  
no metropolitan standardization

W.H., ~~Stevens~~, social, journalism  
1900s do it better

poor, mean, ignorant, etc.

motorcycles, cars, airplanes

civilization & progress, highest climax

etc.

dissemination of dictatorship of art,

newspapers, art, culture

Japan civilization - second hand fixing  
seen size condition record breaking

• superstition, irrationalistic

- a million cowards

or spiritual attainment like

the new civilization rather

sustaining civilization

materiality

Since I arrived

about 1200 - we have had  
rainy days.

Wrote back to Mr. Hayes

and got him to do

the same, and

sounded good.

Evening again our too high a price;  
too much to pay for a good time.

Good

and the next day we had a

very long and hard

train ride - 10 hours.

Finally

arrived at 1 PM

Common experience

Primary distribution 31% in  
222 sq. mi. toward areas with  
commodification 31% 22%

Secondary; broad neighborhood factor.

Urban area 34%

Urbanized periphery 22%

Post-urban city like 22%, residential like 22%

City = 10107, non-residential 10%

Non culture = non circulation = 1010

1010000

Primary group - distributions by size and neighborhood 100%

Secondary group

Subtype of culture 100%

31%

Urban - 31% transition of nature

non naturalization of nature 22%

Post, bed room 22% 22%

22%

Good, medium, 22% community center, building

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1. *Urticaria* — *Urticaria* —  
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poison ivy — *Urticaria*  
mosquito bite — *Urticaria*

2. *Quarantine* — *Quarantine*  
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Q.

Quarantine — *Quarantine*  
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SHAW AND THE WING

(Continued)

Shaw will be interested probably in the effect of the new  
ordinance on the Negro. It is claimed to be unconstitutional because  
it makes of an unconstitutionally discriminatory statute. Dr. Charles E.  
Shaw, who is to the University of Nebraska in 1944, now 21 years  
of age, was born in Boston, Massachusetts, and his mother, a  
Negro, and his father, was German. He is a member of the  
National League of Negroes, however, especially the correspondence  
of Boston, being in Newark. There is no organization, at present  
in Boston, calling itself by the name of the National League, and  
I feel it would not be in the best interest of Shaw to do  
anything which would give the name of Negro to a group of people who  
are not, in reality, a racial unit. It would be really a disqualification if even  
one of Shaw's friends or associates were compelled to use  
such a name, or any other thing of the kind.

Under the direction of Shaw, and with financial assistance  
from Mr. Carl, Mr. H. J. Green, Mr. Tamm, Captain, Mr. C. L. and  
Missouri, it will be called simply over the state, collecting funds and money  
for separation. Any historical article, without reference to race  
or color, and every book, newspaper, magazine, etc., from  
whatever source, may be used, and presented in its original form,  
and the authorship of the article or book, and the date of publication,  
will be given. This is to be done in the same manner as  
the Negro Rights League, although we are not to be affiliated  
with that organization, but, rather, to be independent, and  
to have our own organization.

It is my opinion that the Negro Rights League  
should be disbanded.

and the new one, which is also the original of the  
existing one, is 175 m. The old bridge was  
about 100 m. long and 10 m. wide, and had a  
span of about 100 m. It was built of timber  
and had a wooden roadway, which was  
about 10 m. wide.

It is also important to note that the results of the study were not limited to the first year of the study. The results showed that the intervention was effective in reducing the incidence of the disease in the second year as well.

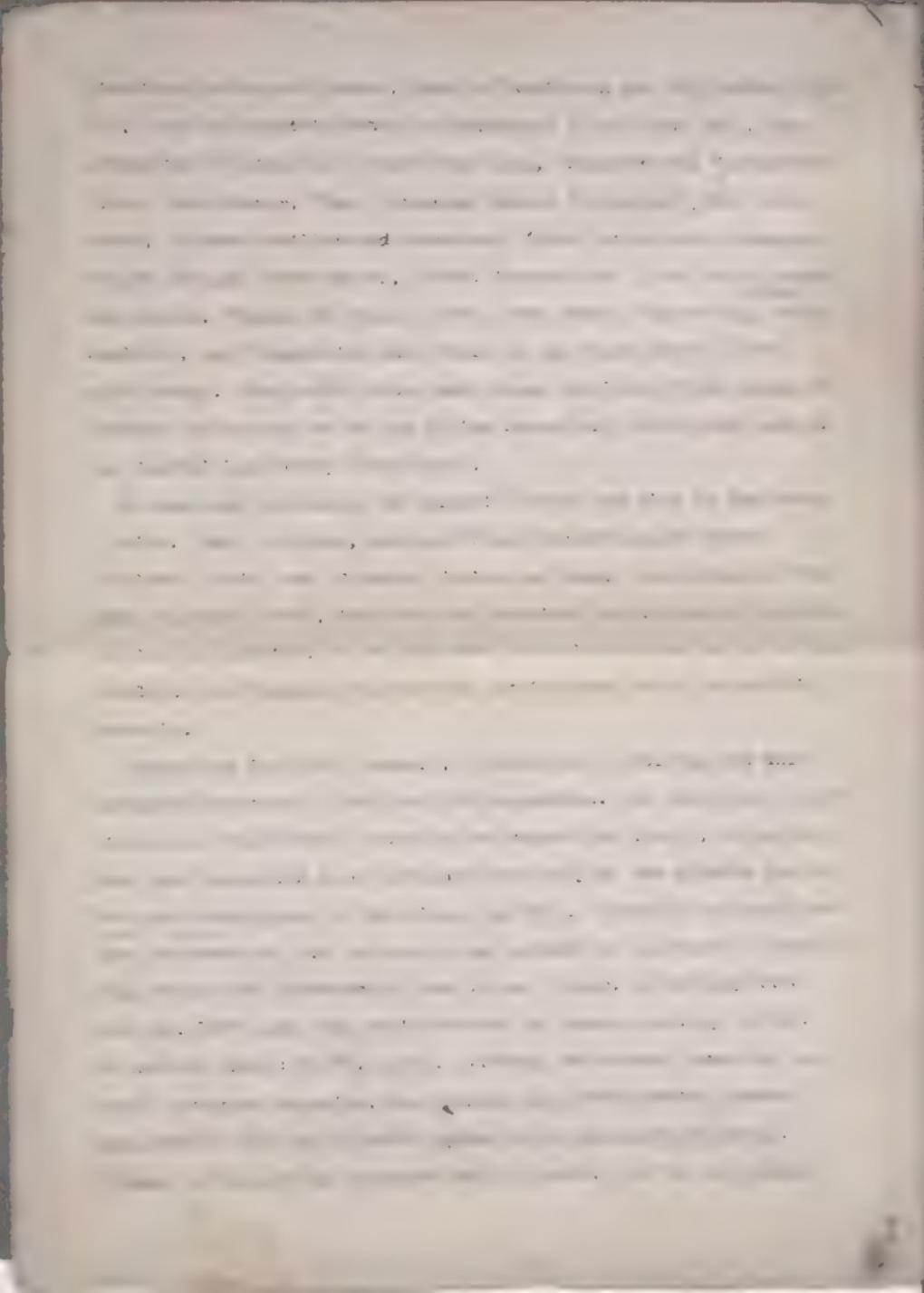
Upon his return to China he was instructed, as will be often the case, to represent the local officials at the "Walled City" of Nanking. He was there to inspect a certain building which had been built out at the Government's expense. After the fall of Peking, when the Chinese rebels had taken control of the city, they had looted and destroyed the building, so that it was necessary to have it repaired. The Chinese officials were very anxious to have the work done quickly, and the Chinese General who was in charge of the city, sent a telegram to the Chinese Minister of War, asking him to send a company of soldiers to help the Chinese workmen to repair the building. The Chinese Minister of War, in turn, sent a telegram to the Chinese Ambassador in London, asking him to send a company of soldiers to help the Chinese workmen to repair the building.

and the other two were in the same condition.

The one was a small white bird, with a black patch on each wing, and a short crest. It had a very long tail, which it held upright, and which was composed of many feathers. The other was a small black bird, with a crest, and a short tail. It had a white patch on each wing. Both birds were very active, and seemed to be in great distress. They were perched on a branch of a tree, and were looking down at the ground. The ground was covered with fallen leaves and twigs. The birds were flapping their wings and chirping. They seemed to be trying to fly away, but were unable to do so. They were also pecking at the ground, possibly searching for food. The scene was set in a forest, with trees and bushes in the background. The lighting was dim, suggesting it might be dusk or dawn.

The birds continued to chirp and flap their wings. They were perched on a branch of a tree, and were looking down at the ground. The ground was covered with fallen leaves and twigs. The birds were flapping their wings and chirping. They seemed to be trying to fly away, but were unable to do so. They were also pecking at the ground, possibly searching for food. The scene was set in a forest, with trees and bushes in the background. The lighting was dim, suggesting it might be dusk or dawn.

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the development of new methods to measure physical quantities, and the application of these methods to the solution of problems in the field of atomic and nuclear physics. In this connection, the author has made an extensive study of the theory of the interaction of particles with matter, and the application of this theory to the solution of problems in the field of atomic and nuclear physics. He has also made an extensive study of the theory of the interaction of particles with matter, and the application of this theory to the solution of problems in the field of atomic and nuclear physics. The author has made an extensive study of the theory of the interaction of particles with matter, and the application of this theory to the solution of problems in the field of atomic and nuclear physics. The author has made an extensive study of the theory of the interaction of particles with matter, and the application of this theory to the solution of problems in the field of atomic and nuclear physics.

In this paper, the author presents a detailed analysis of the theory of the interaction of particles with matter, and the application of this theory to the solution of problems in the field of atomic and nuclear physics. The author has made an extensive study of the theory of the interaction of particles with matter, and the application of this theory to the solution of problems in the field of atomic and nuclear physics. The author has made an extensive study of the theory of the interaction of particles with matter, and the application of this theory to the solution of problems in the field of atomic and nuclear physics. The author has made an extensive study of the theory of the interaction of particles with matter, and the application of this theory to the solution of problems in the field of atomic and nuclear physics. The author has made an extensive study of the theory of the interaction of particles with matter, and the application of this theory to the solution of problems in the field of atomic and nuclear physics.

the dry plant community. He has given a system of classification which conforms to the origin and history of the association, whether it be from bare rock to climax or a change during a dry period, or the shift produced by vegetational occupancy of the earth.

Whether we agree or disagree with the system, it is so far the only logical scheme which permits a rather complete understanding of all the associations it has which have brought about the present structure. Even though we fail to accept in full the theory that the climax formation is an organism, the system is none the less useful in helping to explain the inseparable connection of the formation with the climate, and the heterogeneity or diversity of the vegetation. I would agree with G. Tansley and say "that Dr. Clements has given us a theory of vegetation which is given us & cannot be denied an indispensable foundation for the most fruitful modern work" and that he "is by far the pre-test individual creator of the modern science of vegetation."

H. L. Shantz.

624 State St. Dept. No. 2,  
Santa Barbara, California.

From Read by Vol. 6, No. 4, p. 317-318, Oct., 1944.

## Medieval Domesticity

p. 42. Plainly, the medieval house had scarcely an inkling of the two important sanitary requirements of the present day, privacy and comfort.

## Medieval Hygiene and Sanitation

p. 45. There is no proof that sanitation or hygiene were much worse in the medieval towns than in the American or European towns of the first half of the nineteenth century; nor is there sufficient, but it is not poor, sanitary arrangement alone responsible for the cause of the prevalence of medieval epidemics.

## Medieval City Growth

p. 57. Roussea, indeed, discovered that the villages and towns of France could be plotted in the same regularity on the pattern of a large well, but a foot between them.

17

Church Towns of the Loire  
1800-1850

p. 58. In the early centuries of the Middle Ages, between eleventh and the fourteenth, as in the seventeenth in New England, the surplus population was cared for by building new cities, sometimes large by, but nevertheless an independent and self-sufficient unit. The medieval city did not break through its walls and strayed over the countryside in an amorphous host.

## Medieval population

p. 87 The typical medieval town ranged in size from three or four hundred, which was frequently the size of a fully privileged municipality in Germany, to forty thousand, which was the size of London in the fourteenth century. No hundred thousand achieved earlier by Paris; and Venice was mighty exceptional.

p. 88 All these statistics, it is true, date from the century after the Black Death, which in some provinces carried off half the population; but even if one deducts the figures for those numbers, in terms of modern population meanings, were numerically small.

## Sixteenth century

p. 87 London 250,000  
p. 81 Paris (15<sup>th</sup> c.) 180,000

## Eighteenth century

p. 81 - 9 In the eighteenth century in cities with over 200,000 included Moscow, Vienna, St. Petersburg, and Paris; while already in the 100,000 class were Warsaw, Berlin, and Copenhagen. Toward the end of the eighteenth century Naples had 433,130 inhabitants, Paris a. c. 670,000, and London over 800,000.

## Middle-aged towns.

Fig. But in the cultural importance of international trade was high, its economic importance — particularly as a source of urban growth — has been grossly exaggerated for the early Middle Ages. The fact is that even at a later period than eleventh century the merchants with their retainers accounted, according to von Below, for only a small part of the town's population: far smaller than today. For the producers in the early medieval town composed about four-fifths of the inhabitants, as compared with two-fifths in the modern city.

## medieval to baroque

p. 77 From medieval universality to  
baroque uniformity; from medieval  
localism to baroque centralism; from  
the absolutism of God and the Catholic  
Church to the absolutism of the temporal  
sovereign and the National State — there  
is a passage of four or five centuries  
between these phenomena.

## The Influence of Power

p. 87. The two arms of the new system are the army and the bureaucracy; they are the temporal and spiritual support of a centralized despotism. Both agents used as much part of their influence to a large and more pervasive power, that of capitalist industry and finance,

\* \* \* \* \* Changes from a life economy to a money economy

## Movement and its Avenue

p. 94. In the linear evolution of the city plan, the movement of wheeled vehicles played a critical part.

It was during the sixteenth century that carts and wagons came into more general use within cities.

p. 95. the need of avenues for military movement

p. 96. In view of the importance of the army, to the ruling classes, it is no wonder that military traffic was the determining factor in the new city plan.

p. 97. In the medieval town the upper classes and the lower classes had gathered together, on the street, in the market-place, as they did in the cathedral ...

Now, with the development of the wide avenue, the dissociation of the upper and the

lower classes achieves form in the city itself. The rich drive; the poor walk.

Do not say the danger was exaggerated; in France the stage-coach, introduced in the seventeenth century, killed more people annually than the railroad that followed it.

### Position of the Palace

p.108 Fisher on Lichtenstein's steam pump, the first used in Austria, was not applied to a mine but in the gardens of the Belvedere Palace in Vienna.

p.110 As in so many other departments of life the Baroque court here anticipated the ritual and the physical reaction of the twentieth century metropolis. A similar ground; a similar London; a similar attempt to take refuge in 'distractions' from the tyrannical opposition that had become a routine and from the routine that had become an overwhelming oppression.

## Bedroom and Saloon

p.114. The three functions of producing, selling, and consuming were now separated in three different institutions, three different sets of buildings, three distinct parts of the city.

As the result of the household's becoming exclusively a consumer's organization, the housewife lost her touch with the affairs of the outside world: she became either a specialist in domesticity or a specialist in sex, something of a drudge, something of a co-artisan, more often perhaps a 'one of both'. Then came the 'private house' comes into existence: private from business,

## Furniture

p.115. To make up for lack of effective domestic work, a new type of housework was invented that took up the slack and enriched the ritual of conspicuous consumption. I mean the care of furniture. The fixtures of the medieval household were equipment: chairs to sit on, beds to sleep in; icons to play before: so much and no more. Furniture is really a re-invention of the baroque period, for by furniture one means useless or super-refined equipment, delicate vases to dust, inlays and precious woods to polish, metal work to keep shiny, curtains to be shaken and cleaned, bier-a-brac and curios to be washed. Dust had outstripped use; and the care of furniture commanded time that once went to the weaving of tapestries, the embroidery of garments, the making of useful household 'presences', perfumes, and simples.

p. 115 And the rooms no longer opened  
into each other: they were grouped along  
the corridor, like houses on a street.

p. 118 Privacy was the new luxury of  
the well-to-do.

For the first time not merely a curtain  
but a door separated each individual  
member of the household from every other  
member.

Privacy, mirrors, heated room. These  
things transformed tail-blown love-making  
from a seasonal to a year-round occupation:  
another example of bourgeois regularity. In  
the heated room, the body need not cower  
under a blanket: visual eroticism added  
to the effect of tactile stimuli: the pleasure  
of the naked body, symbolized by Titian  
and Rubens and Fizetard, was part of  
that dilation of the senses which accompanied  
the more generous dietary, the freer use  
of wines and strong liquors. The more

extravagant dresses and perfumes of  
the period.

## The Middle of Speculative Overcrowding

p. 120 But this expansion of upper class quarters was at the expense of lower class dwellings.

p. 121. Unfortunately, the expropriation of the peasant and the depression of the urban worker went hand in hand. Competition for space by poor unprivileged immigrants had the same effect on seventeenth century Paris as on eighteenth century Manchester, and nineteenth century Liverpool and New York; the ground rents rose and the living quarters worsened. A hectare of land in Paris was in the thirteenth century worth 2600 francs, according to Avernel: in the twentieth century a hectare in the same district was worth 1,297,000 francs. Who benefited by this rise? Not the occupants, whose incomes kept pace with it? Not

those of the workers.

To understand this servility and depression, one must realize that before the humanitarian conscience of the nineteenth century had begun to alter social attitudes, destitution had been accepted as the normal lot in life for a considerable part of the population. In the seventeenth and eighteenth centuries, it has been estimated that as much as a quarter of the urban population consisted of casuals and beggars. In a memorandum dated 1684 the chief of Police in Paris referred to the 'incredible misery that afflicts the greater part of the population of this great city.' Between forty and sixty-five thousand were reduced to outright beggary.

p. 138. This effort to span life in all its dimensions... this delight in sensuous extravagance, in the body's appetites, in all that the ear, the eye, and the touch could make their own, was an essentially different attitude from which had governed the Middle Ages. If it had developed first in the cinquecento artists and scholars and courtiers, it had now at last by the eighteenth century created its form in the city. These things were to have revolutionary implications. After the French Revolution, the city began one by one, to absorb the institutions of the court and the aristocracy -- The successful industrialist first imitated the aristocracy; then whole bodies of people began to demand similar privileges for the city at large. What is called the rise of democracy is, as far as the city is concerned, the diffusion of baroque privilege.

p. 142. Versailles was essentially a spoiled child's toy, precisely as about Spengler worshiping coldly high dynastic politics was, realistically considered, only child's play: adult "futilism" disguised as national statesmanship and architectural magnificence.

## Change

p 143. Meanwhile the solidarity of the upper classes was visibly breaking down, the court was becoming superfluous. In every quarter, the principles of aristocratic education and culture were being displaced by a single minded devotion to pecuniary success. The new industrialists and bankers, intent on making money and extending their powers through their various institutions, had no use for habits of life that did not give them a direct edge over their competitors, bunglers, people, rich speculators who had made a lucky gamble, ruthless tacticians or savages who had pushed their way to the top, ambitious men, avuncular men, the Napoleons of the factory and the counting house, people as innocent of the principles of human self-control as a dispersed baby, pushed themselves into the established ranks.

The bizarre dream of power and luxury had at least two all conflicts, twin goals. The tangible pleasures of the

hunt, the dinner-table, the bed were constantly in view. The new dream of human destiny, as the militarists projected it, had little place for even sensual delights; it rested on a doctrine of productive avarice and physiological denial; and it took the form of a wholesale disparagement of the needs of life.

p 144. The political base of this new type of urban aggregation rested on three main pillars: the abolition of the guilds and the creation of a state of permanent insecurity for the working classes; the establishment of the open market for labor and for the sale of goods. The maintenance of foreign dependencies as source of raw materials, necessary to the new industrialists, and as a ready market to absorb the surplus of inefficient industry. Its economic foundations were the exploitation of the coal mine, the rusting

increased production of iron, and the use  
of a steady, reliable — if highly inefficient  
— source of mechanical power: the steam  
engine.

But the basis of this system, in the  
ideology of the time, was thought to be,  
the atomic individual. To guard his property,  
to protect his rights, to ensure his freedom  
of choice and freedom of enterprise, was  
the sole duty of government.

This myth of the untrammeled individual  
was in fact the democratization of the  
baroque conception of the despotic Prince:  
now every enterprising man sought to  
be a despot in his own right: emotional  
despots like the romantic poet; practical  
despots like the businessman. Adam Smith  
indeed had a comprehensive theory of  
political society; he had a correct conception  
of its economic basis of the city and  
valued insight into the non profit making

economic functions. But his interest gave  
way, in practice, to the aggressive desire  
to increase the wealth of individuals: that  
was the be-all and the end-all of the new  
Malthusian struggle for existence.

## Population again

p. 146. In 1800 England had a population of a little over nine million, Germany had some twenty-four million, France about twenty-seven million, and the United States not much over five million. By 1930, their population in round numbers had risen to respectively forty-five million, sixty-six million, forty-two million, and one hundred twenty-three million.

## Mechanization

p. 147. In their new environment, only machines could be quite at home; for their 'expresso' order, purpose, regularity, without the mechanically irrelevant need for love, or sympathy, or beauty.

### Laissez-faire

p. 154 The test of social success was not the consequences to society in good homes and healthy lives and a friendly environment: the sole test was the pecuniary reward that flowed to the enterpriser. By his rewards shrink, the enterprise was unwise' ...

p. 155 The time of the Enlightenment, as W. H. Riehl sharply said, was a period when people yearned for humanity and had no heart for their own people; when they philosophized about the state and forgot the community. 'No period was more individual than the eighteenth century, in the development of a common community spirit, the medieval community was dissolved and the nation was not yet ready, ...'

### Capitalism

p. 156. But despite tenet professed of laissez-faire, the new industrial interests sought their own special kinds of monopoly. Through patents, trade-marks, special salaries, tariffs, and exclusive rights of exploitation in colonial markets: above all, they needed the privilege of calling upon the soldiery of the state and defend their property and their persons in case of an uprising on the part of the workers.

In a society where pecuniary values were uppermost and where no special motives were permitted to stand in the way of financial aggrandizement, such distinctions could gain no hold upon the industrial interests. The development of privilege in hand could only come through the initiative of the community as a whole, with an enlightened and

militant working class as the spearhead.

### Factories

p. 163. Factories were permitted to exist wherever the owner happened to have bought enough land to build on; 'free competition' alone determined location, without thought of the possibility of functional planning; and the jumbling together of industrial, commercial, and domestic functions went on steadily in industrial cities.

### Workers' houses

This is for housing itself, the alternative supply. In the industrial towns that grew up on older foundations, the workers were first accommodated by

turning old country houses into tenement barracks. In these modern houses each separate room now would suffice a whole family: from Dublin and Glasgow to Bombay, the standard is one room per family long and. Bed overcrowding, with three to eight people of different ages sleeping on the same floor, often aggravated room overcrowding in such human sties. This type of overcrowding, as we have seen, had been going on in the big capitals since the sixteenth century and by the beginning of nineteenth, according to Dr. Willan, who wrote a book then on the disease of London, it had reached an incredible state of physical debility among the poor. The other form of dwelling offered to the working class was essentially a standardisation of these old slum conditions; but it had the further defect that the price of the new houses and the materials of construction usually had more of an original

deancy of the older timber houses: they were ferry-built from the ground up.

p. 162. This deficiency of living quarters was well-nigh universal among the workers in the new industrial towns, once the protective regime was fully established.

p. 163. The age of invention and mass production scarcely touched the workers' house or its utilities. Iron piping came in; likewise the imbruted water closet; eventually the gas light and the gas stove, the stationary bath tub with attached water pipes, and fixed bathtubs; a collective water system with running water available for every house, and a collective sewage system. All these improvements slowly became available to the middle and upper economic groups after 1830; within a generation of their introduction they

indeed became middle class necessities. But at no point during the paleotechnic phase were these improvements made available to the mass of the population. The problem for the builder was to achieve a modicum of decency without these new expensive utilities. This problem remained soluble only in terms of a primitive rural environment.

### The minimum of life

p.176. From the standpoint of theoretic capitalist-economics there was no housing problem in the palaeo-clinic towns. Even the unskilled paid worker could be housed at a profit, in strict accordance with his income, provided no outside standards based on health and safety were introduced to mar the free play of economic forces. If the result was a slum, that fact was a justification of the slum, not a condemnation of the profit system.

p.177 Perhaps here we have a key to the essential human achievement of the new urban culture: it worked out a minimum of life. --- A minimum of schooling; a minimum of rest; a minimum of cleanliness; a minimum of shelter. A grim sort of negative virtue hung over

the urban improvements of the period, and its' highest boast was the expansion of these minimum conditions and these negative gains.

p.180. The speculative spread of the industrial town meant the growth and spread of a dreary prison environment. The reward an honest man got for a faithful day's labor was not measurably different from that which a mere owing member of society got as punishment:

...Indeed, half the anti-social symptoms that broke out in the new towns, the brawls, the pervasive drunkenness, the love of violence, were not social signs or inner-debravity: They were blind reactions to the environment; a step higher, perhaps, than complete submission to its degradation,

## Cultural deterioration

p. 171 The big century that boasted its mechanical conquests and its scientific precision left its social processes to chance, as if the scientific habit of mind had exhausted itself upon machines and was not capable of advancing further.

These new cities not merely failed for the most part to produce art, science, or culture. They failed at first even to import that from older centers.

p. 172 Under such conditions, one must have all one's senses blunted in order to be happy; and first of all, one must lose one's taste. This loss of taste had an effect, — don't we well-to-do people begin to eat canned goods and stale foods, when fresh ones were available, because they could no longer tell the difference.

## Sanitation & ignorance

102

### Noise

p. 195 Recent experiments with sound in Chicago show that if one goes into noise by percentages up to 100 per cent which is the sound - like an artillery cannonade — that would drive one mad if continued over an extended period, the percentage has only, from eight to ten per cent noise, the suburbs fifteen, the residential districts of the city, twenty-five per cent, commercial districts thirty-four cent and industrial districts thirty-five. These broad areas and doubtless hold almost everywhere during the last century and a half, though perhaps the upper limit were higher. One must remember, too, that the paleotechnic trains made no effort to separate factories from workers' houses, so that in many towns

noise was omnifacult, in the day and  
often in the night.

City growth in number  
against

P. 198 In 1850 there were but six  
towns with over one hundred thousand  
population in the United States, and  
6.7 in Germany. By 1900 there  
were thirty-six such places in the  
United States and thirty-three in  
Germany.

City - St. Paul II.

P. 201. -- Variety; 190: the solidification  
of chaos; -- Every avenue was designed  
in accordance with the most inexorable  
of laws -- the law of chance. The street  
picture lost all constancy. It was a jumble  
of competing styles, carried out in no  
common material, ordered to no common  
visual end. -- Individualistic style  
competition -- mistakenly looked upon as  
a sign of a quite different state, individuality  
--- Took the place of that collective mastery  
of form which characterizes a vital culture.

3c + n

P. 203 In this pursuit of interior decoration  
the middle class dwelling, like the city,  
outside, became an odd curiosity still;  
-- As for the worker's dwellings,  
imitating all these fashions -- the only

forms open to the worker's purse, they  
were little better than a rubbish heap.

Contact was associated with ugly  
superficiality, misplaced art; purposeless  
manufacture; decorative dirt.

10. In its most acute  
existing city

The unselected, the disorderly, the  
deficient, prevailed to such an extent  
in the cities of the nineteenth century,  
both new and old, that the very precision  
and regularity of a good mechanical  
order, which at very least one might  
reasonably have expected to emerge  
in the new civilization, were lost. As  
an expression of a machine culture, or  
as an environment planned intelligently  
for mechanical production, the new  
cities were dead cities. Much of the 'new'

architecture of the last twenty years,  
with its one-sided glorification of the  
factory as a standard of form, must  
be recognized as an extremely baneful  
attempt to build the utilitarian city.

## Imperialism

p. 214 The industrialist, in turn, abandoning his naïve belief in laissez-faire and free enterprise, came to rely upon his imperialistic allies to help stabilize industry and to give it monopoly advantages: hence protective tariffs, subsidies, export subventions.

## City growth, again

p. 225. Peoples of European stock multiplied from about two hundred million during the Napoleonic Wars to about six hundred million at the outbreak of the World War. This stock, which accounted for only about one-sixth of the population of the earth in Malteus' day, rose to about a third of it in a little over a century. In 1800 not a city in the Western World had over a million in population. London, the biggest, had only 959,310, while Paris had a little more than half a million, and even about half of that. By 1850 London had over two millions and Paris over a million inhabitants: they were still without serious rivals. But by 1900 eleven metropolises with more than a million inhabitants had come into existence including Berlin

Church 1. ter 12, § 17

Re 2<sup>nd</sup>

Chicago, New York, Philadelphia,  
Moscow, St. Petersburg, Wien; Tokyo,  
and Calcutta. Thirty years later, as  
a result of this terrible concentration  
of capital and the military and mechanized  
means of exploitation, there were twenty-  
seven cities with more than a million  
population, headed by New York and  
grading down to Birmingham,  
including metropolises on every continent,  
even Australia.

p. 74. For the purpose of clarity one should perhaps  
adopt for sociology a parallel set of terms to the  
Mendelian classification of biological traits into domi-  
nants and recessives; and one should add two other  
useful categories: survival and mutations. In Rome  
before Constantine the Christian Church was a mutation.  
Within the city one would scarcely be aware of its presence;  
living in crypts and catacombs on the outskirts, it had  
even its physical presence. In the medieval city the  
Church was a dominant: no part of life could fail  
to record its existence and its influence. In the most  
seventeenth century capitals, the Church had  
become a recessive: still an indelible visible  
presence, but no longer a unifying and dynamic  
social force. In the metropolis today the Church  
is a survival: its power rests upon numbers,  
wealth, material organization, &c. In its  
capacity to give its stamp to the daily activities  
of men: it counts much, but except by habit  
and rote, it contributes little to the active  
spiritual life of the city.

## Metropolis + n

b. 230 ... They work to a single end: to give the stamp of authenticity and value to the style of life that emanates from the metropolis.

They establish the national brand: they attempt to control the national market; they create a picture of a unified, homogeneous, completely standardized population that bears, in fact, no relation to the actual regional substratum — although in the course of time it partly succeeds in producing the thing it has imagined.

In all these efforts the stage, the media before screen, the radio no less than the newspaper and the printed book, concentrate upon fixing the national appetite upon just those products that the metropolis can sell at a profit. Similarly, they create an image of a valuable life that can be satisfied only by a ruthless concentration of human interest upon bicyclury standards and bicyclury results. The cities of the metropolis, the fairs of the metropolis, the dust empires.

life of Park Avenue and the Kurfürstendamm, Piccadilly and the Champs Elysées become the goals of vulgar ambition.

## Blighted area + n

b. 247. The blighted area may be defined as an area which is chronically unable to pay its share of the municipal services essential to its existence, and unable by reason of its economic status to pay for its own internal renovation and repair. All working class neighborhoods are to some degree poverty in a state of blight because, in the more salubrious areas, the cost of the utilities that connect them with the center has risen steadily without any coeval rise in the income or economic privilege of the inhabitants; while in the center, only intensive connection of the foul set sort will pay its way:

## Crowd !

p.249 Moreover, beyond a certain point, even mechanical devices demand a limitation in size. With the use of loud speakers, the visible presence of a speaker is futile in an arena so large that most of the members of the audience are too far away to observe his expression or even follow his gestures. One of the reasons that passive sports, (87 p.250) which put the emphasis upon the spectator, occupy such a large place in metropolitan routine is that the choice is one between vigorous existence or none at all. Forty-five thousand people may attend a baseball game: but not even Chicago could boast the twenty-five hundred diamonds that would be necessary if each spectator claimed to right to play.

When institutions are planned rationally for convenience and for functional use, the metropolitan pattern does not suffice. To achieve a functional relationship, the unit has to be scaled

to actual working capacity: reproduction rather than growth is what is required, while the effect of actual growth can be achieved through the orderly integration of the separate units. Where inorganic expansion of mechanical facilities takes place, a chronic deficiency results. The size of the building or the institution becomes a mere mask for this deficiency. Fifty thousand people gathered in a single place can do fewer things together than two-and-a-half months or two thousand; their chief function is limited to bellowing there and saying Hurrah! or Heil! at the right moment. That is why dictators love crowds and seek to provide bigger arenas and auditoriums for them: the bigger the crowd, the easier, their function.

## Metropolis as a hiding place

p.266. With respect to these relaxations, the big city has the same advantage that international fair once had: its very bigness makes of an admirable hiding place. Within its endless streets, the metropolis provides shelter from prying eyes: If one has anything to conceal, the place to conceal it is among a million other people. The anonymity of the big city, its impersonality, is a positive encouragement to a-social or anti-social actions.

## A-social character of metropolis

p.267. The a-social character of metropolitan routine can in fact be partly deduced from the relative cost of police service in cities of different size. In American cities with a million or more people, the cost of police is sixty cents per inhabitant per year: in cities with from three hundred to six hundred thousand

it is forty cents; in cities between one hundred and three hundred thousand, it is only twenty cents, while cities with thirty thousand people or under pay only ten cents. Doubtless the bigger cities get more in the way of service; but they need it. In the United States, except in cases of rape and manslaughter, the number of police cases per thousand forms an ascending curve in direct relationship to the size of cities.

EP 18. 63 + T x II

p. 282 The biological norm of city growth, that is, the degree of concentration beyond which the community fails in reproducing the full quota of its members, is between twenty-five and fifty thousand. As we even out the economic and cultural differences between the rural and the urban environments, this tentatively fixes an upper limit for the size of the biotechnic city. With cities of such size forming the dominant element in the urban pattern, no country need utilize its hinterland as mere breeding ground.

P. 281 + 282

p. 284. This form of desolation, in the act of driving nature accessibility, removes all that is valuable from the enjoyment of those who seek solitude and a reverent sense of the spiritual. There are indispensable corrections to mechanical rigors and the compulsive collective disciplines and the mass present crowds of modern life.

The principle of democracy does not mean that every type of environment should be equally available to every type of man; nor that every part of a natural scene should be as accessible as is convenient as the concept holds of a social institution. This vulgarization of democracy must not be allowed to infect the essential nature sections and isolated worlds that cut the natural varieties of the natural and make the whole world over into a single metropolitan image.

## bathroom

p. 423. Whereas bathrooms were frequently not provided even for the finest houses also in the nineteenth century, by the end of the century the standard of a separate lavatory for every family - became a minimum ideal.

## birth control, p. 430

p. 430. The reduction of the household to a biological unit has been one of the most consequential steps in the whole process of urbanization; it is closely tied to two conditions which distinguish a biotic culture from cultures in which the notion of life was an incidental by-product of existence. The first of these is the growing care of the child, p. 431. This growing intensity of interest in the life of children was increased, no doubt, by the practice of birth control, which made each individual child more precious to the parent, as well as the object of more concentrated attention and tender care.

At the same time, of course, coitus control has not increased the erotic possibilities of marriage itself. erotic control and the williness of erotic expression occupy an ever more abundant part of the daily life of both men and women.

p. 432. Domesticity and eroticism, once enemies as far apart as Africa & Siberia

and his Cleopatra, have now advanced together.

At the same time, every part of the dwelling must not arranged equally with an eye to sexual privacy and untrammelled courtship. Private bedrooms alone are not enough: soundproof partitions are equally important, and in communal units soundproof floors. ... Sexual intercourse may not forever be doomed, exist to luxuriously rich, to take place only, like burglary, under cover of darkness, in that part of the day when the energies are fast ebbing away. But before it can occur at any other times many weaknesses in house design will have to be rectified.

### The death of the monument

p. 439. The death of the monument was intuitively forecast by more than one spirit during the last century. For the fact is that this architectural change has implications that go far beyond the conception of individual tombs, memorials, or public buildings: it affects the character of our culture as a whole and the very texture of urban life. Why, for example, should each generation go on living in the quarters that were built by its ancestors? These quarters, even if not solid and battered, were planned for other uses, other habits, other modes of living: often they were mere make-shifts for the very purpose they were supposed to serve in their own day: the best under existing limitations that now no longer hold,

## City as a monument

p.440 The more the energies of a community become immobilized in ponderous material structures the less ready is it to adjust itself to new emergencies and to take advantage of new possibilities. A two-story building with shallow foundations may be easily torn down, if a different type of structure is needed. But a twenty-story building has a deep foundation, elaborate mechanical equipment, an expensive substructure: it is not easily demolished as a physical structure, still less easily as a credit structure, no matter how short its period of amortization. If such a building should be replaced by a smaller building, or by no building at all, the original capital investment will stand in the way of such rational adaptation.

242 Their assets are, as the saying is, frozen:  
243 Petrifaction.

244 The deflation of our mechanical monuments,

then, is no less imperative than the deflation of our symbolic monuments. For the biotechnic age will be progressively marked by a simplification of mechanical equipment. Our present overload of mechanical utilities in the dwelling house, the skyscraper, and the city, particularly marked in American cities, is a symptom of our inability ...

$$\underline{L = 122 \times E / }$$

p.445 One of the great advantages of mechanical standardization is to increase the number of constants in the environment; and this is equally true of the advance of scientific knowledge. It is extremely unlikely that medical science will suddenly discover that dark and airless buildings are preferable to light and airy ones, or that a cultivated landscape is more inimical to life than a crowded, dusty, street.

### Economy: the principle of living

p.420 Economy, which is an earlier culture signified niggardliness, now provides the means for collective largesse.

p.417 The age of crustacean building has given away to the age of vertebrates, and the wall, no longer, a protective shell, has become a skin.

### Garden / Not

p.428 Gardens are for delight, and delight by itself is an important factor in the maintenance of health.

From the standpoint of hygiene, parks and gardens are not luxuries for the fortunate minority: they are essential if the city is to become a permanent habitat for man.

What the baroque planner gave to the palace and the upper class residential quarter alone, we now conceive as essential for every part of the city.

personality 1512

have been significant social change has come about during the last three centuries; but it has only been partly assimilated, and its expression in architecture has not been fully absorbed. This is a transference of interest from caste to personality: the loss of a caste moral mask, and its replacement by a more subtle tissue of individuality.

... and opportunity to have access to the soil meant salvation of the Nation. -- (translators)  
(applied religion)

150. As long as the distinctive and primary and dominant characteristic of his background played no important part in defining his position in society, as, e.g., the birth to an illustrious family, was a kind of background. In the bolder, in the daring room, he wanted, he attempted to express his personality through his looks, — a deliberate, a conscious effort to display how rich he was, how ancient

his lineage was; how mighty his caste was in the community: these things seemed important.

151. Good design today follows the fashion first set in theater decoration by Appia: it concentrates attention upon the action and function in the foreground, and it does not permit attention to be diverted from the actors to the scenic background. It is the face, the voice, the posture, the thought, that shall tell the story about the owner's personality; not what he has acquired by way of material assets; not by this fashion and that favor applied to his material equipment. The more generic the background, the less obtrusive its effect, the more subtly will it tell its story — and the more effectively the actual human presence will count in the fiction.

152. And as the background becomes more standardized so that it no longer applies to a single caste but a whole community, no longer to a single community but a whole civilization, so will the foreground become more individualized,

## Individualism and Socialization

1955 - Misleading under the noble slogans of the right of man, pretending to continue its old war on despotic power, individualism established itself as the claim of small groups of privileged people to exploit the work of other men on the basis of a monopoly, partial or complete, of land, capital, credit, and the machinery of production. For the single despotism of the king, it substituted a multitude of petty, and not so petty, despotism: industrialists, financiers, robber barons. 'Socialism' on the other hand, has meant in practice the unlimited capacity of the government and the armed forces of the state to impose obedience and co-operation upon its subjects in times of war. pushed to its extreme, it becomes the statification of fascism and the unity of non-dictatorship. Individualism rested on the doctrine of the 'free market' in which price exercises the function of an almighty Providence; socialism rested on the doctrine of the closed frontier, in which every human activity within, thought itself, is subjected to state monopoly. The inequalities of

the first and the uniformities of the second were equally oppressive to a good society.

In the sense in which individualism and socialism have gained currency, both are mythological distortions of the underlying facts of community life: the processes of individuation and socialization. In actuality, these terms are alternatives only in the sense that north and south are alternatives. They indicate directions of action, without giving any descriptive reference to the goal to be reached. No human society is conceivable in which, to some degree, both tendencies did not play an active part.

1958. The base must be generic, equalized, standardized communal; the emergent must be specific, melanochromic, individual, aristocratic; differentiated groups, differentiated individuals, differentiated regional and civic communities.

### From a Money-Economy to Life-Economy

p.458 In the pecuniary economy that developed during the last five hundred years, there was only one criterion of effort : profit. If more profit could be obtained by baking stones than by baking bread, stone would be baked, even though in fact people were starving. Scarcity and surplus, demand and supply, had reality not in relation to man's actual wants, but in relation to the market. ... Money was the symbol of power, and power was the chief end of man.

p.459 Without doubt the prime obstacle to urban decentralization is that a unit that consists of workers, without middle class and rich呱呱 that exist in a big city, is unable to support even the elementary civic equipment of roads, sewers, fire department, police service, and schools. At present it is only by remaining in metropolitan areas, where the taxes derived from the well-to-do districts can be partly applied to the working-class quarters, that the worker can obtain even a minimum of the facilities for a good life.

p.460 Here again the total inadequacy of a pecuniary economy to satisfy the essential biological and social needs of a community has been completely demonstrated. As the standards of housing have risen, ... a quantitative shortage in dwelling space has been chronic in highly industrialized countries like England ...

... The failure of the pecuniary economy in this direction is abysmal: all the more because rent is the largest single item in a family budget: rising from ten or fifteen per cent among the working classes of Holland to between twenty and thirty per cent for them in other countries. Rents that occupy more than twenty per cent of the total, especially on the lower income levels mean a sharp curtailment of vital necessities at the bottom in the budget.

p.461 They signify that some of the most essential jobs in the construction and equipment of cities can not be produced, on any terms, under a pecuniary economy and that houses in particular can be built only, ignoring the basic standards, based on empirical data, that are appropriate in a different civilization,

Housing, in fact, is the focal point in that change from a plutocracy to a biotechnic economy ...

Under the biotechnic economy, three conditions are required. Instead of wages and income directing market demand, vital demand determines the level of income ... First we must erect a standard of living. In terms of housing, the minimum standards are set by objective criteria of air, water, sunlight, heat, privacy, and so forth, and further modified by those social provisions which tradition and current investigation provide necessary for the nurture of children and the education of responsible citizens. At any given period, in any given region, these standards should set a minimum level for wages; industries that cannot meet such a level must be looked after as economically inefficient and socially undesirable, to be abolished or taken over by the community.

p. 462. Production must be directed, in greater amounts, into channels where a surplus of energy is most available, — or direct use in life ... The break of automation machinery, — the displacement of labor, the

surplusage of modern agriculture all mean -- this release of energy for the direct service of life.

p. 463 Under a biotechnic economy, consumption is directed toward the conservation and enhancement of life: a matter where qualitative standards are imperative.

Vital standards must be expressed in terms of basic and health and biological activity and creative elements and social opportunity: that is, in terms of goods and environmental improvements in which machine production will have but a subordinate part.

In putting a vital standard thus, we therefore make the dwelling house, the school, and the city to concentrate, all-eugenic and in industrial and agricultural production. The aim is not more goods for more people to buy, but more opportunities for them to live: merely such increases in goods as are instrumental to 'the best life possible.' Under such an economic order, communal choices become more important than individual choices ...

Fortunately, our civilization as a whole is now at a

point technically where it is feasible to give the population as a whole that basis in good breeding and good nurture which has hitherto been the exclusive possession of aristocracies.

b. 7.8

These new utilities and machines changed the nature of the dwelling house in two important ways. They broke down its self-sufficient isolation and linked it up, with closely built roads, water mains, sewer pipes, gas pipes, electric wires, telephone lines with other houses in the same or adjacent; the house functions no longer stand in a collective unit ...

### What is a modern dwelling?

p. 466 The new home is primarily a biological institution, and the house is a specialized structure designed to functions of reproduction, nutrition, and nurture. To begin with, definition a little, the dwelling house is a building and in such a fashion that man's may be used in and may be served, that the processes of hygiene and sanitation may be facilitated, that rest and sleep may be enjoyed without disturbance from the outside world, that social intercourse may take place with privacy and minimum of disturbance at all times in the year, and that in case of emergency may be carried on under favorable conditions of health, friendship and supervision. (p. 467)

Add to these primarily biological requirements the provision of space for social intercourse and play and eating, and the definition of the modern dwelling is complete. Certain functions, domestic in origin, require more and more space or special facilities; these should be taken out of the house even further than they are today: childbirth and infanticide, illnesses, weddings, and funerals; and their communal buildings.

## Housing by Communities — 1949

12. 2. 1951

3.419. All these improvements, furthermore, added to an initial cost of 10 houses; but whereas the basic structure constituted originally about ninety per cent of the cost, today the structure constitutes but twenty per cent.

... the 1949 income of the family would have to afford greatly in order to cover the rise in the cost of living. The alternative is sufficient additional built-up space. Both are dubious.

... Hence what has been gained in internal efficiencies — more rooms or winter, running water, heated shower for domestic service — has so far been partly forfeited through decrease of stationery people. The reason for the widespread backwardness of housing throughout our civilization is that no fundamental change is possible except by means of a communal redistribution of income.

4.420. From the viewpoint of community housing

## The school as community Nucleus

7.492. What are the new dominants in the changing biotechnic economy? ... the dwelling house and the school, with all their specialized communal aids, constitute the essential nucleus of the new community.

In the new city, a neighborhood has visible definition. Its size is determined by the convenient walking distance for children between the farthest house and the school and playground in which a major part of their activities are focused. Its pattern is determined by the need of isolating school and home from the noise & traffic and its dangers; so main traffic arteries of any sort must never run through a neighborhood.

## The School - Old and New

p. 478. Under the patriarchic and metropolitan regime, the schools had the duty of making the population submissive to truth, submissivistic, and docile to external stimuli. Today the school has another task: that of making the community as a whole capable of controlling its destiny, capable of directing and making over every aspect of its activities, in practical and in instrumental, the basis of the communal. A large order, is it not? The school in the central position occupied by the church in medieval Christendom.

From the old school to the organic school; from the child school to the child-adult school; from a desiccated environment to a living environment; from closed issues, and mechanical instruction to open inquiry and cooperation; everything in a natural process of living; that is our social rebirth. From the part-time school, which is held up, to the full-time school taking stock of and acting upon the life of the neighborhood, there is a revolution from an education which makes and values man in good part denied by the actual

environment and the social practice of the community to an education that is integral with the demands and possibilities of life and that strikes no needed effort to make personality in conformity with purpose and ideal; here is another series of steps that make the task of modern education.

## The biotechnic economy, again

p. 478. The important thing is to recognize the nature of the civic audience, and the necessity of a civic economy. Industry must be planned to fit the civic and civic needs first and industrial enterprises directed -- as will become fast surplus of energies out of which will come the resources and structures, -- needed to urban existence. A well-directed economy will reduce the number of unemployed and rebels, will lessen the enterprise directed to evil, competitive salesmanship and advertising, will diminish wanton wastes and stoppage; and it will multiply by manyfold the present supply of doctors, teachers, administrators, artists, scientists, and scholars.

## Social function of the city

1.11 The undifferentiated common cost of primary associations is reduced by more specialized associations; but the collective situation itself becomes stronger through such multiplication, turning into a more complex and many-colored strand. From simple consciousness (posses) of kind in the tribe or people to the developed consciousness of kind that goes with local associations and differentiated groups; from rabit to deer; from fox and mink to a square equilibrium of hawk, fox, raven, etc. as it comes to comprehending, identifying, adapting — that is the path of both human and the individual. This transfer of emphasis from the associations to the consequences of the primary group to the political classes, to purposive associations, and the ethical code of the secondary group is one of the main functions of the city. The city is in fact the physical form of the highest and most complex type of association.

## Political life = 272 - 281

1.483. We have still to organize neighborhoods and corporate organizations as if the political functions of the community were important now. In the concentrations we have called cities, it is no wonder that political life, as a concrete exercise of rights and functions, has given way to various subtle forms of diversions. And centralization, in new conditions, have been planned as social units, without concern in its architecture, not a sufficient number of real meeting rooms for group activities, etc., a robust political life, not effective collective action and a sense of renewed public responsibility can easily grow up.

## Principles of Urban Order

### Contractual Organization

less - diharmony and conflict, elements whose acceptance and resolution are indissociable to psychological growth.

With such a more co-operative order in the design of cities, therefore, we are seeking an order in which non-significant kinds of conflict, more complex and continually shifting kinds of disharmony, may take place without us seeking a contractual order. Hence the factor and for variety in urban life: varied groups and dissimilar varied activities.

In designing cities we must provide an environment broad enough and rich enough never to degenerate to a 'model community'.

The city will be single class, with a single social function, with a single type of industrial activity, more than, possibility for the higher forms of human development than a one-sided urban environment. In addition, society has grown at the expense of smaller, closely-knit groups, under a contractionary movement. This balance is to be found only in metropolis areas.

- City & p. # 5200 = 37200 3851700 -

p. 488 Limitations on size, density, and area are absolutely necessary to effective social intercourse; and they are therefore the most important instruments of rational economic and civic planning. The unwillingness in the past to establish such limits has been due mainly to two facts: the assumption that all upward changes in magnitude were signs of progress and automatically good for business; and the belief that such limitations were essentially military in that they proposed to decrease economic opportunity — that is, opportunity for profiting by competition — and to halt the inevitable course of change.

- more nucleated city or polycentric city -

p. 490 Through these convergent efforts, the principles of the polycentric city have been well established. Such plans must result in a better opportunity for the primary group, with all its values of frequent direct meeting and face-to-face intercourse; they must also result in a more centralized pattern and a more comprehensive life for the nation — in the direction to the more reasonable regulation of the

reduce the necessary social concentration and social drama. We need such results through deliberate community planning and closer regional linkages.

### - A satellite city plan -

What is important in this emerging conception is not so much in the notion of satellite cities — not even of satellite garden cities. For, as we have said before, it assumes that one particular city will retain planetary functions; whereas, in the statement of social relativity and social function, one must conceive that each multi-functional region in size from five thousand to fifty thousand will have equal 'values' in the regional system. When no metropolis can achieve a truly metropolitan life, it must boldly re-build its regional structure as well as its existing economic base. And for any particular function to happen here or there must not be subordination to a center, but what is significant is not the number of satellites, but the quality of service.

American sociological scholarship at its best. Wide in range, exhaustive, and intelligent. Ablest treatment of population, particularly in relation to city growth, to date.

Wright, Henry: Re-Housing Urban America,  
New York : 1935.

Comprehensive survey by a gifted technician and planner: a fine humane intelligence who left a deep mark on the urban movement for housing and regional planning. See also New York State Housing and Regional Planning Commission's Final Report; mainly the work of Henry Wright.

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So far one of the best books on a subject still  
little studied, though Hilbrecht was  
aware of its importance.

- Howard, Ebenezer: *Utopian Nature and the Social Order*. Revised Ed. New York; 1922.

Howard's book is perhaps the most elaborate  
utopian book in English. He writes of American  
conditions.

- Hutton, Patrick: *Cities in Evolution*. 1895.

The greatest and available of Hutton's writings  
on cities; made up chiefly of scattered papers,  
but not a unified kind of view.

- Jones, Morgan J. B.: *History of Agriculture in England and America*. New York; 1925.

One of the few books available on a topic  
which history has treated with the allusion  
to the city, though not quite to  
the same degree. A certain's history  
of the evolution of rural forms is also  
available.

- Kropotkin, D. C., and P. L.: *Men and His Work*; an Introduction to Human Geography.

London; 1917.

Hobartson's study of the major natural regions laid  
the foundation for later work by Fenneman and  
others.

- {  
• Howard, Ebenezer: *Garden Cities of Tomorrow*.  
{  
• { London; 1902. (First edition published as *To-morrow*,  
London; 1895.)

A close study of two cities is useful for any  
serious student of housing, city planning, or  
regional development. Sir Ebenezer was nothing  
but a court stenographer, so much for specialization.  
His book has had consequences more far-reaching  
than the two English cities that have sprung up  
out of it.

- Kropotkin, Peter: *Mutual Aid*. London; 1902.

Pioneer work on symbiosis in social and  
of the basis applicable to politics. An excellent  
Darwinian emphasis upon the non-predatory  
aspects of life. Note chapter on Mutual Aid  
in the Medieval City.

- Mackay, Barbara: *The New Towns*; a  
Philosophy of Regional Planning. New York; 1925.

Important not merely for its original  
suggestions of new town planning, original  
theory, and its broader picture of regional  
planning.

Goldsmid 1922 Early Civilization, An Introduction to Anthropology.

Fiske 1934, Habitat, Economy and Society

Diamond 1935, Primitive Law

Hobhouse and others, 1915 'The Material Culture and Social Institutions of Simpler Peoples.'

322. ~~w~~ Malinowski 1913, Family among the Australian Aborigines.

✓ Richards 1932, Hunger and Work in a Savage Tribe

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Boas 1938 General Anthropology.

~~w~~ Wissler 1926 The Relation of Nature to Man in Aboriginal America.

Warner, 1937 A Black Civilization, a Social Study  
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Elkin, 1938 The Australian Aborigines.

~~w~~ Wissler, 1929 An Introduction to Social Anthropology.

323. ~~w~~ Malinowski, 1926 Crime and Custom in Savage Society.

~~w~~ Wissler 1940 American Indian of the United States.

Lewis 1924, Primitive Society.

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(~~w~~) Wissler 1922 The American Indian, An Introduction  
to the Anthropology of New World.

325. Malinowski 1922 Agronauts of the Western Pacific

326. Malinowski 1929 The Sexual Life of the Savage in North

Western Melanesia.

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Trail, is a regionalist in the great tradition  
of Thoreau, Marsh and Shaler.

- ① Mackenzie, Findlay, Editor: *Planned Society ;  
Yesterday, Today and Tomorrow*. New York :  
32 1937.

A symposium by thirty-five economists,  
sociologists, and statesmen. Many impor-  
tant papers and full bibliography.

- ✓ Mumford, Lewis: *Technics and Civilization*,  
New York ; 1934.

Study of the machine in its social, cultural,  
and economic aspects. Complementary in  
scope and theme to the present volume.

- ✓ Odum, Howard W., and Moore, Henry E :  
*American Regionalism*. New York : 1938.

Effective outline of various approaches to  
contemporary regionalism in the United  
States. Critical and compendious.

- ② Thompson, Warren S.: *Population Problems*.  
32 New York : 1930.

American sociological scholarship at its best.  
Wide in range, exhaustive and intelligent.  
Ablest treatment of population, particularly  
in relation to city growth, to date.

- ✓ Wright, Henry: *Re-Housing Urban America*,  
New York : 1935.

Comprehensive survey by a gifted technician  
and planner: a fine humane intelligence  
who left a deep mark on the entire movement  
for housing and regional planning. See also  
New York State Housing and Regional  
Planning Commission's Final Report :  
mainly the work of Henry Wright.

Copied from 'Humphord, L.: The Culture of Cities. New York, 1938.', pp. 495-496.

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## GLOSSARY

Certain terms, originally coined by Patrick Geddes a generation ago, have been freely used in *The Culture of Cities*. For the convenience of those who have not read *Technics and Civilization*, in which they are more fully defined, the following definitions are provided.

Eotechnic. Refers to the dawn age of modern technique: an economy based upon the use of wind, water and wood as the principal material for construction. Dominant in Western Europe from the tenth to the eighteenth century. Marked by improvements in navigation, glass-making, and the textile industries, from the thirteenth century on; by widespread canal-building and increased utilization of power and power-machines in the latter phase.

Paleotechnic. Refers to the coal and iron economy, which existed as a mutation in the eotechnic period (blast furnace and primitive railway) but began in the eighteenth century to displace the eotechnic complex, and became dominant between 1850 and 1890. Key inventions: steam-engine, railroad, steamship, Bessemer converter, various automatic devices in spinning and weaving. Up to the last quarter of the nineteenth century the eotechnic economy remained as a recessive.

Neotechnic. Refers to the new economy, which began to emerge in the eighties, based on the use of electricity, the lighter metals, like aluminum and copper, and rare metals and earths, like tungsten, platinum, thorium, et al. Vast improvements in utilization of power, reaching its highest point in the water-turbine. Destructive distillation of coal; complete utilization of scrap and by-products. Growing perfection and automatism in all machinery. Key inventions: electric transformer, electric motor, electric light, and electric communication by telegraph, telephone, and radio; likewise vulcanized rubber and inter combustion engine. At the present time, the eotechnic complex is a survival, the paleotechnic is recessive, and the neotechnic is a dominant.

Biotechnic. Refers to an emergent economy, already separating out more clearly from the neotechnic (purely mechanical) complex, and pointing to a civilization in which the biological sciences will be freely applied to technology, and in which technology itself will be oriented toward the culture of life. The key inventions: on the mechanical side, are the airplane,

P.486 the phonograph, the motion picture, and modern contraceptives, all derived directly, in part, from a study of living organisms. The application of bacteriology to medicine and sanitation, and of physiology to nutrition and daily regimen, are further marks of this order; parallel applications in psychology for the discipline of human behavior in every department are plainly indicated. In the biotechnic order the biological and social arts become dominant: agriculture, medicine, and education take precedence over engineering. Improvements, instead of depending solely upon mechanical manipulations of matter and energy will rest upon a more organic utilization of the entire environment, in response to the needs of organisms and groups considered in their multifold relations: physical, biological, social; economic, esthetic, psychological.